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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,498	10/23/2003	Karlheinz Winter	32128-187212	6037

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EXAMINER
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EASHOO, MARK

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/690,498

Applicant(s)

WINTER ET AL.

Examiner

Mark Eashoo, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 18-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4 pgs.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Election/Restrictions*

Applicant's election without traverse of claim group I, claims 1-17, in the reply filed on 09-MAR-2006 is acknowledged.

Claims 18-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claim grouping, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 09-MAR-2006.

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

The information disclosure statements filed 10-MAY-2004 and 23-OCT-2003 fail to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

It is noted that an English translation of the German search report has not been received by the Office. Furthermore, a mere indication of the type of reference (X, Y, A, etc.) does not substantially provide a concise explanation of the relevance.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The

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Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "extruded polymer parts", and the claim also recites "mainly tubes" which is the narrower statement of the range/limitation.

Claims 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, each claims refers to a limitation that is essentially X % above a particular processing temperature. The claims are indefinite because the metes and bounds of the claim cannot be clearly ascertained because the unit (ie. K, °C, °F, or R) is not recited. It is noted that 15% on one scale is not necessarily 15% on all others.

With respect to claim 11, the temperature limitation does not have units so the claim is indefinite since the actual temperature is undefined.

Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. Specifically, the omitted structural cooperative relationships are that various apparatus structures are recited without indicating how the apparatus structure materially effects the process (ie. step-wise limitations). To be entitled to patentable weight in method claims, recited structural limitations must affect the method in a manipulative sense and not amount to mere claiming of a use of a particular structure. See *Ex parte Pfeiffer* 135 USPQ 31. In the instant case, claims 2-6 appear to recite apparatus structure which amounts to a mere claiming of a use of a particular structure.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at

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the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenhalgh et al. (US Pat. 3,979,488).

Regarding claims 1-3: Greenhalgh et al. teaches the basic claimed process for making peroxide crosslinked extruded polymer parts, comprising: heating a cross-linkable/curable polymer (Fig. 1 and 6:35-55); heating the polymer to a temperature above the polymer melt temperature is below that of the cross-linking temperature (4:45-60 and 9:30-10:45); continuously feeding the heated/melted composition to an extrusion die to form a part (Fig. 1); and maintaining the temperature in the extrusion die above the cross-linking temperature to cause at least partial cross-linking (5:29-6:35).

Greenhalgh et al. does not teach controlling the temperature in an extruder using a heating/cooling unit. However, Greenhalgh et al. does suggest that "ideally" that temperature in the extruder is controlled from by mechanical working and acknowledges that as "a practical matter ideal conditions are difficult if not impossible to achieve" (5:50-6:35). Nonetheless, Official Notice is given that temperature control of extruders by internal or external heating/cooling means is well known in the extrusion art. At the time of invention a person of ordinary skill in the art would have found it obvious to have used an internal or external heating/cooling means to aid in controlling extruder temperatures, as commonly practiced in the art, in the process of Greenhalgh et al., and would have been motivated to do so in order help prevent fouling of the extruder due to premature curing.

Regarding claim 4: Greenhalgh et al. teaches that various other types of extrusion apparatus may be used (7:10-20). Official Notice is given that twin screw extruders are well known in the extrusion art. At the time of invention a person of ordinary skill in the art would have found it obvious to have used a twin screw extruder, as commonly practiced in the art, in the process of Greenhalgh et al., and would have been motivated to do so since such extruders are known to provide very good mixing (eg. uniform distribution of curing agent).

Regarding claim 5-6: Greenhalgh et al. also teaches heating the die a variety of heat sources (8:29-36).

Regarding claims 7-14: Greenhalgh et al. teaches that the processing temperatures are controlled to a level of about 25-50°F of the curing temperature before reaching the die and heated to safely and expeditiously cure the material (6:10-35). Accordingly, Greenhalgh et al. substantially suggests optimization of the processing temperatures. At the time of invention a person of ordinary skill in the art would have found it obvious, if not implicit therein, to have optimized the processing/curing temperatures through routine experimentation,

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as commonly practiced in the art, in the process of Greenhalgh et al., and would have been motivated to do so in order to help prevent fouling of the extruder due to premature curing and/or over-curing.

Additionally, it is noted that Greenhalgh et al. contemplates a variety of polymers, including polyolefins, and commercially available curing agents (6:35-50). It is submitted that a person of ordinary skill in the art would recognize that the process conditions would be optimized according to the materials used to make the product.

Regarding claim 15: Greenhalgh et al. teaches holding the part at a curing temperature after (Fig. 1, element 60) after it passes through the die (Fig. 1, element 58).

Regarding claim 16: It is implicit that the extruded part of Greenhalgh et al. is cooled after cooling in order for the part to be used by a consumer.

Regarding claim 17: Greenhalgh et al. teaches an extrusion pressure of below 290 bar or 4200 psig (table 1).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached form PTO-892.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Eashoo, Ph.D.  
Primary Examiner  
Art Unit 1732

23-May-06  
me

23/May/06